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**EXPOSURE TO A CHEMOSENSORY IRRITANT ALTERS C-FOS EXPRESSION IN THE VENTROLATERAL MEDULLA OF PRAIRIE VOLES.** **S.A. Wager-Pagé* and J.R. Mason, USDA/ APHIS/ADC/DWRC and Monell Chemical Senses Center, Philadelphia, PA 19104**

The immediate early gene, c-fos, an indicator of neuronal activation is induced in the brainstem of rodents following noxious or aversive stimulation. Studies indicate that the chemosensory irritant, o-aminoacetophenone, decreased ingestive behavior in birds via a trigeminally mediated mechanism. The effect of o-aminoaceto-phenone on c-fos expression in brainstem sites of prairie voles (Microtus ochrogaster) was evaluated utilizing immunocytochemical techniques. C-fos expression was increased in the principal sensory trigeminal nucleus and catecholinergic tracts in the ventrolateral medulla of voles following exposure to o-aminoacetophenone on apple slices. In another set of studies, preweighed apple slices were presented to singly-housed nondeprived voles in their home cages in a two choice test. Voles decreased their 2 hour intake when o-aminoaceto-phenone (0.1% v/v) was applied to apple pieces ($0.75 \pm 0.12$g) compared to control intake ($1.3 \pm 0.2$g ), ($p<0.05$). O-aminoaceto-phenone (0.01% v/v) inhibited 2 hour apple intake ($0.5 \pm 0.1$g) compared to control intake ($1.0 \pm 0.1$g), ($p<0.003$). The inhibition of ingestive behavior of voles by o-aminoacetophenone may be mediated via an aversive effect of this chemosensory irritant. Increased expression of the immediate early gene product, c-fos, in brainstem sites of voles following exposure to o-aminoacetophenone provides additional support for this mechanism of action.